Forming non-reducing saccharides having a trehalose structure as an end unit and having a degree of glucose polymerization of at least 3 from reducing amylaceous saccharides having a degree of glucose polymerization of at least 3;

(2) Optimum temperature

About 75°C when incubated in 20 mM acetate buffer (pH 5.5);

(3) Optimum pH

About 5.0-5.5 when incubated at 60°C for 60 min;

(4) pH Stability

About 4.5-9.5 when incubated at 25°C for 16 hours;

(5) Thermostability

Substantially not inactivated even when incubated in an aqueous solution (pH 7.0) at 85°C for 60 min.; and

(6) Partial amino acid sequence

Having an amino acid sequence of at least two contiguous amino acid residues in SEQ ID NO:3 and/or SEQ ID NO:4 and being encoded by a chromosomal DNA which hybridizes to a probe having the nucleotide sequence of 5'-AAYYTNTGGTAYTTYA ARGA-3' (SEQ ID NO:7) and a probe having the nucleotide sequence of 5'-GARGARTGGCAYWSNATHAT-3' (SEQ ID NO:8).